BRUHAT BANAGLORE MAHANAGARA PALIKE

Executive Engineer-Yelhanka Division

Detailed Estimate

Name of Work: **Improvements to roads ,drains and footpath in BHEL Layout ,Chowdappa Layout and construction of lead off drain and asphalting in doddabetahalli layout in ward no. 03 Yelhanka Satellite town subdivision**

Estimate Amount : 9000000.00

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	CIVIL WORKS								
1	KSRRB 300-1. **Earthwork excavation by manual means** in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 1.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications. MORTH / Chapter 3 **(Page No141., I.No.19.1 of KPWD S.R 2015-16).**								
		Cum							
	New Culverts								
	road to NS School in hariraju badavane								
	Ch: (0 - 159)								
			1	7.5	1.50	0.900	10.13		
	Kaverilayout from Doddabetahalli to dead end								
			1	8	1.50	0.900	10.80		
			1	6	1.50	0.900	8.10		
	Desilting								
	Chowdappa layout road from doddabetahalli to chowdappa house								
	Ch: (0 - 199)		2	199	0.60	0.600	143.28		
	Ch: (199 - 239)		1	40	0.60	0.600	14.40		
	road to NS School in hariraju badavane								
	Ch: (0 - 159)								
	Ch: (0 - 159)		2	159	0.60	0.600	114.48		
	Sri laxmi krupa house from doddabetahalli to end road								
	Ch: (0 - 111)		2	111	0.60	0.600	79.92		
	Ch: (0 - 28)		2	28	0.60	0.600	20.16		
	Ch: (0 - 50)		2	50	0.60	0.600	36.00		
	New Box Drain								
	Kaverilayout from Doddabetahalli to dead end								
	Ch: (0 - 63)	L/s	1	56	0.60	0.600	20.16		
	Ch: (0 - 63)	R/s	1	63	0.60	0.600	22.68		
	Ch: (0 - 194)	L/s	1	186	0.60	0.600	66.96		
	Ch: (0 - 194)	R/s	1	188	0.60	0.600	67.68		
	New RCC Drain								
	lead off drain								
	Ch: (0 - 134)		1	21	1.20	1.000	25.20		
							639.95	177.88	113833.42

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
2	Providing granite slabs of selected quality roughly dressed and fixed in cement mortar (1:6) including fixing curing etc., complete. 7.5cm thick(Page No 25., I.No.5.31.1 of KPWD S.R 2015-16).								
		Cum							
	New Box Drain								
	Kaverilayout from Doddabetahalli to dead end								
	Ch: (0 - 63)	L/s	1	56	1.20		67.20		
	Ch: (0 - 63)	R/s	1	63	1.20		75.60		
	Ch: (0 - 194)	L/s	1	186	1.20		223.20		
	Ch: (0 - 194)	R/s	1	188	1.20		225.60		
							591.60	663.12	392301.79
3	KSRB 4-1.2 : Providing and laying in **position plain cement concrete of mix1:3:6** with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @0.892cum and fine aggregtes @ 0.465cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted,in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications.Specification No. KBS 4.1, 4.2 **(Page No 12., I.No.4.2 of KPWD S.R 2015-16).**								
		Cum							
	New Culverts								
	road to NS School in hariraju badavane								
	Ch: (0 - 159)								
			1	7.5	1.20	0.100	0.90		
	Kaverilayout from Doddabetahalli to dead end								
			1	8	1.20	0.100	0.96		
			1	6	1.20	0.100	0.72		
	New RCC Drain								
	lead off drain								
	Ch: (0 - 134)		1	21	0.90	0.100	1.89		
							4.47	5236.92	23409.03
4	Providing and laying Plain /reinforced cement concrete **M20** for Box drain walls of thickness 10cm to 20cm including centring shuttering for work etc. complete as per approved drawing and design MORTH specification No.1500,1700,2200 **(Page No258., I.No.37.59.2 of KPWD S.R 2015-16).**								
		Cum							
	Raft								
	New Culverts								
	road to NS School in hariraju badavane								
	Ch: (0 - 159)								
			1	7.5	1.50	0.150	1.69		
	Kaverilayout from Doddabetahalli to dead end								
			1	8	1.50	0.150	1.80		
			1	6	1.50	0.150	1.35		
	New RCC Drain								
	lead off drain								
	Ch: (0 - 134)		1	21	0.90	0.150	2.84		
	Wall								

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	New Culverts								
	road to NS School in hariraju badavane								
	Ch: (0 - 159)								
	Kaverilayout from Doddabetahalli to dead end		2	7.5	0.20	0.800	2.40		
			2	8	0.20	0.800	2.56		
			2	6	0.20	0.800	1.92		
	New RCC Drain								
	lead off drain								
	Ch: (0 - 134)		2	21	0.15	0.800	5.04		
							19.59	**6931.44**	**135804.24**
5	KSRB 4.9.2 : Providing **T .M.T steel reinforcement** for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3 for TMT Bars Fe500 **(Page No 17., I.No.4.46.2 of KPWD S.R 2015-16).**								
		Tonne							
	Taking 60kg/m3								
				19.5925*60/1000			1.18		
							1.18	**69805.80**	**82060.21**
6	Providing precast slab of 250mm thick including cost of all materials, labour, curing,transportation,loading ,unloading,etc.,complete as per the direction of engineer in charge- Data rate								
		Sqm							
	New Slabs								
	New Culverts								
	road to NS School in hariraju badavane								
	Ch: (0 - 159)								
			1	7.5	1.20		9.00		
	Kaverilayout from Doddabetahalli to dead end								
			1	8	1.20		9.60		
			1	6	1.20		7.20		
							25.80	**5111.00**	**131863.80**
7	Providing precast slab of 100 mm thick including cost of all materials, labour, curing,transportation,loading ,unloading,etc.,complete as per the direction of engineer in charge- Data rate								
		Sqm							
	New Slabs								
	New RCC Drain								
	lead off drain								
	Ch: (0 - 134)		1	21	0.90		18.90		
							18.90	**1834.00**	**34662.60**

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	ROAD WORKS								
8	KSRRB M300-14. **Excavation for roadwork in all type of soil with hydraulic excavator** of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location to a lead of 1.00 km and complete as per specifications. MORTH Specification No.301 **(Page No 142., I.No.19.14 of KPWD S.R 2015-16).**								
		Cum							
	Chowdappa layout road from doddabetahalli to chowdappa house								
	Ch: (199 - 239)		1	40	5.00	0.425	85.00		
	road to NS School in hariraju badavane								
	Ch: (0 - 159)								
	Ch: (0 - 159)		1	159	5.50	0.425	371.66		
	Sri laxmi krupa house from doddabetahalli to end road								
	Ch: (0 - 111)		1	111	5.50	0.425	259.46		
	Ch: (0 - 28)		1	28	5.50	0.425	65.45		
	Ch: (0 - 50)		1	50	5.50	0.425	116.88		
	Kaverilayout from Doddabetahalli to dead end								
	Ch: (0 - 63)		1	63	7.00	0.425	187.43		
	Ch: (0 - 194)		1	194	7.00	0.425	577.15		
	3rd main (AS Digital)from Yelahanka main road to End road								
	Ch: (0 - 97)		1	97	7.00	0.425	288.58		
	Ch: (97 - 127)		1	30	5.50	0.425	70.13		
							2021.73	**143.32**	**289753.63**
9	KSRRB 300-58. Compaction of original ground with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3 (Page No 148., I.No.19.64 of KPWD S.R 2015-16).								
		Sqm							
	Chowdappa layout road from doddabetahalli to chowdappa house								
	Ch: (199 - 239)		1	40	5.00		200.00		
	road to NS School in hariraju badavane								
	Ch: (0 - 159)								
	Ch: (0 - 159)		1	159	5.50		874.50		
	Sri laxmi krupa house from doddabetahalli to end road								
	Ch: (0 - 111)		1	111	5.50		610.50		
	Ch: (0 - 28)		1	28	5.50		154.00		
	Ch: (0 - 50)		1	50	5.50		275.00		

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	Kaverilayout from Doddabetahalli to dead end								
	Ch: (0 - 63)		1	63	7.00		441.00		
	Ch: (0 - 194)		1	194	7.00		1358.00		
	3rd main (AS Digital)from Yelahanka main road to End road								
	Ch: (0 - 97)		1	97	7.00		679.00		
	Ch: (97 - 127)		1	30	5.50		165.00		
							4757.00	**4.86**	**23119.02**
10	KSRRB M400-6.1. Construction of **granular sub-base** by providing close graded material, mixing in a mechaical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications. A. Plant Mix Method.Close graded granular sub-base material as per 400-1 For Grading- II Material **(Page No 154., I.No.20.4.2 of KPWD S.R 2015-16).**								
		Cum							
	Chowdappa layout road from doddabetahalli to chowdappa house								
	Ch: (199 - 239)		1	40	5.00	0.150	30.00		
	road to NS School in hariraju badavane								
	Ch: (0 - 159)								
	Ch: (0 - 159)		1	159	5.50	0.150	131.18		
	Sri laxmi krupa house from doddabetahalli to end road								
	Ch: (0 - 111)		1	111	5.50	0.150	91.58		
	Ch: (0 - 28)		1	28	5.50	0.150	23.10		
	Ch: (0 - 50)		1	50	5.50	0.150	41.25		
	Kaverilayout from Doddabetahalli to dead end								
	Ch: (0 - 63)		1	63	7.00	0.150	66.15		
	Ch: (0 - 194)		1	194	7.00	0.150	203.70		
	3rd main (AS Digital)from Yelahanka main road to End road								
	Ch: (0 - 97)		1	97	7.00	0.150	101.85		
	Ch: (97 - 127)		1	30	5.50	0.150	24.75		
							713.55	**1622.16**	**1157492.27**
11	KSRRB M400-17. Providing, laying, spreading and compacting graded stones aggregate to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406 (Page No 157., I.No.20.18 of KPWD S.R 2015-16).								
		Cum							
	Chowdappa layout road from doddabetahalli to chowdappa house								
	Ch: (199 - 239)		1	40	5.00	0.225	45.00		

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	road to NS School in hariraju badavane								
	Ch: (0 - 159)								
	Ch: (0 - 159)		1	159	5.50	0.225	196.76		
	Sri laxmi krupa house from doddabetahalli to end road								
	Ch: (0 - 111)		1	111	5.50	0.225	137.36		
	Ch: (0 - 28)		1	28	5.50	0.225	34.65		
	Ch: (0 - 50)		1	50	5.50	0.225	61.88		
	Kaverilayout from Doddabetahalli to dead end								
	Ch: (0 - 63)		1	63	7.00	0.225	99.23		
	Ch: (0 - 194)		1	194	7.00	0.225	305.55		
	3rd main (AS Digital)from Yelahanka main road to End road								
	Ch: (0 - 97)		1	97	7.00	0.225	152.78		
	Ch: (97 - 127)		1	30	5.50	0.225	37.13		
							1070.33	1713.96	1834494.24
12	KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WBM,WMM ,including clearing of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per Specifications. MORTH Specification No. 502 (Page No 160., I.No.21.6 of KPWD S.R 2015-16).								
		Sqm							
	Chowdappa layout road from doddabetahalli to chowdappa house								
	Ch: (199 - 239)		1	40	5.00		200.00		
	road to NS School in hariraju badavane								
	Ch: (0 - 159)								
	Ch: (0 - 159)		1	159	5.50		874.50		
	Sri laxmi krupa house from doddabetahalli to end road								
	Ch: (0 - 111)		1	111	5.50		610.50		
	Ch: (0 - 28)		1	28	5.50		154.00		
	Ch: (0 - 50)		1	50	5.50		275.00		
	Kaverilayout from Doddabetahalli to dead end								
	Ch: (0 - 63)		1	63	7.00		441.00		
	Ch: (0 - 194)		1	194	7.00		1358.00		
	3rd main (AS Digital)from Yelahanka main road to End road								
	Ch: (0 - 97)		1	97	7.00		679.00		
	Ch: (97 - 127)		1	30	5.50		165.00		
							4757.00	32.40	154126.80

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
13	KSRRB 500-2. **Cleaning the existing black topped** surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH / Chapter 5**(Page No 160., I.No.21.2 of KPWD S.R 2015-16).**								
		Sqm							
	Chowdappa layout road from doddabetahalli to chowdappa house								
	Ch: (0 - 199)		1	199	5.00		995.00		
	3rd main from Yelahanka main road to End road								
	Ch: (0 - 134)		1	134	6.50		871.00		
							1866.00	**3.24**	**6045.84**
14	KSRRB 500-7. Providing and applying **tack coat** using 80/100 grade Bitumen (VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm , heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH/Chapter 5 **(Page No 160., I.No.21.7 of KPWD S.R 2015-16).**								
		Sqm							
	Chowdappa layout road from doddabetahalli to chowdappa house								
	Ch: (0 - 199)		1	199	5.00		995.00		
	Ch: (199 - 239)		1	40	5.00		200.00		
	road to NS School in harjraju badavane								
	Ch: (0 - 159)								
	Ch: (0 - 159)		1	159	5.50		874.50		
	Sri laxmi krupa house from doddabetahalli to end road								
	Ch: (0 - 111)		1	111	5.50		610.50		
	Ch: (0 - 28)		1	28	5.50		154.00		
	Ch: (0 - 50)		1	50	5.50		275.00		
	Kaverilayout from Doddabetahalli to dead end								
	Ch: (0 - 63)		1	63	7.00		441.00		
	Ch: (0 - 194)		1	194	7.00		1358.00		
	3rd main (A8 Digital)from Yelahanka main road to End road								
	Ch: (0 - 97)		1	97	7.00		679.00		
	Ch: (97 - 127)		1	30	5.50		165.00		
	3rd main from Yelahanka main road to End road								
	Ch: (0 - 134)		1	134	6.50		871.00		
							6623.00	**15.12**	**100139.76**

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
15	KSRRB M500- 15. Providing, laying **dense graded bituminous macadam** using 40/60 THP capacity H.M.P with Mechanical paver Gr-II(50mm to 75mm), crushed aggregates of specified grading premixed with 4.5% VG 30 grade bituminous binder and , transporting the hot mix to work site , laying to the required level and grade, rolling with wheeled , vibratory and tandeem rollers to achieve the desired density including all leads and lift cost of all materials, labour, HOM of machineries complete as per specifications MORTH Specification No.507 **(Page No 161., I.No.21.17.6 of KPWD S.R 2015-16).**								
		Cum							
	New Formation								
	Chowdappa layout road from doddabetahalli to chowdappa house								
	Ch: (199 - 239)		1	40	5.00	0.050	10.00		
	road to NS School in hariraju badavane								
	Ch: (0 - 159)								
	Ch: (0 - 159)		1	159	5.50	0.050	43.73		
	Sri laxmi krupa house from doddabetahalli to end road								
	Ch: (0 - 111)		1	111	5.50	0.050	30.53		
	Ch: (0 - 28)		1	28	5.50	0.050	7.70		
	Ch: (0 - 50)		1	50	5.50	0.050	13.75		
	Kaverilayout from Doddabetahalli to dead end								
	Ch: (0 - 63)		1	63	7.00	0.050	22.05		
	Ch: (0 - 194)		1	194	7.00	0.050	67.90		
	3rd main (AS Digital)from Yelahanka main road to End road								
	Ch: (0 - 97)		1	97	7.00	0.050	33.95		
	Ch: (97 - 127)		1	30	5.50	0.050	8.25		
	Profile correction								
	Chowdappa layout road from doddabetahalli to chowdappa house								
	Ch: (0 - 199)		1	199	5.00	0.050	4.98		
	3rd main from Yelahanka main road to End road								
	Ch: (0 - 134)		1	134	6.50	0.050	4.36		
	taking 10% of the area								
							247.18	**7927.20**	**1959445.30**
16	KSRRB M500- 15. Providing, laying **bituminousConcrete** using **40/60 THP** capacity H.M.P with Mechanical paver Gr-II(30mm to 45mm), crushed aggregates of specified grading premixed with 6% VG 30 grade bituminous binder and , transporting the hot mix to work site , laying to the required level and grade, rolling with wheeled , vibratory and tandeem rollers to achieve the desired density including all leads and lift cost of all materials, labour, HOM of machineries complete as per specifications MORTH Specification No.509 **(Page No 164., I.No.21.22.6 of KPWD S.R 2015-16).**								

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
		Cum							
	Chowdappa layout road from doddabetahalli to chowdappa house								
	Ch: (0 - 199)		1	199	5.00	0.030	29.85		
	Ch: (199 - 239)		1	40	5.00	0.030	6.00		
	road to NS School in hariraju badavane								
	Ch: (0 - 159)								
	Ch: (0 - 159)		1	159	5.50	0.030	26.24		
	Sri laxmi krupa house from doddabetahalli to end road								
	Ch: (0 - 111)		1	111	5.50	0.030	18.32		
	Ch: (0 - 28)		1	28	5.50	0.030	4.62		
	Ch: (0 - 50)		1	50	5.50	0.030	8.25		
	Kaverilayout from Doddabetahalli to dead end								
	Ch: (0 - 63)		1	63	7.00	0.030	13.23		
	Ch: (0 - 194)		1	194	7.00	0.030	40.74		
	3rd main (AS Digital)from Yelahanka main road to End road								
	Ch: (0 - 97)		1	97	7.00	0.030	20.37		
	Ch: (97 - 127)		1	30	5.50	0.030	4.95		
	3rd main from Yelahanka main road to End road								
	Ch: (0 - 134)		1	134	6.50	0.030	26.13		
							198.69	**9822.60**	**1951652.39**
	ROAD FURNITURES								
17	KSRRB M800-13. Providing and laying of **hot applied thermoplastic compound** 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803 **(Page No 181., I.No.24.15 of KPWD S.R 2015-16).**								
	Edge line	**Sqm**							
	Chowdappa layout road from doddabetahalli to chowdappa house								
	Ch: (0 - 199)		2.5	199	0.10		49.75		
	Ch: (199 - 239)		2.5	40	0.10		10.00		
	road to NS School in hariraju badavane								
	Ch: (0 - 159)								
	Ch: (0 - 159)		2.5	159	0.10		39.75		
	Sri laxmi krupa house from doddabetahalli to end road								
	Ch: (0 - 111)		2.5	111	0.10		27.75		
	Ch: (0 - 28)		2.5	28	0.10		7.00		
	Ch: (0 - 50)		2.5	50	0.10		12.50		

Sl. No.	Particulars	Unit / Rate	Nos	L in m	B in m	D in m	Quantity	Rate in Rs	Total Amount in Rs
	Kaverilayout from Doddabetahalli to dead end								
	Ch: (0 - 63)		2	63	0.10		12.60		
	Ch: (0 - 194)		2	194	0.10		38.80		
	3rd main (AS Digital)from Yelahanka main road to End road								
	Ch: (0 - 97)		2	97	0.10		19.40		
	Ch: (97 - 127)		2	30	0.10		6.00		
	3rd main from Yelahanka main road to End road								
	Ch: (0 - 134)		2	134	0.10		26.80		
							250.35	473.04	118425.56
	Sub Total								8508629.90
18	Cost towards Design Report and Detailed Estimate,PMC/Third party								85086.30
19	Cost of Plastic@ 8% of bitumen qty for BC	Kg	1	2241.22				27.00	60513.03
20	Cost towards DLP								340345.20
21	Misellenous and other charges								5425.58
	Grand Total								9000000.00

Certificate:-

1. That the workspot inspected by me and found work is necessary.
2. That the area comes with in the Bruhat Bangalore Mahanagara Palike Limits.
3. That the rates are adopted based on the PWD SR of 2015-16
4. That the provisions made in the estimate are necessary and quite essential.

Consultant:

For M/s MECADEZ CORE TECHNOLOGIES PVT LTD

Asst. Engineer
Ward No-03
BBMP

AEE
Yelhanka Sub Division
BBMP

Executive Engineer
Yelhanka Division
BBMP